

Fig. 1

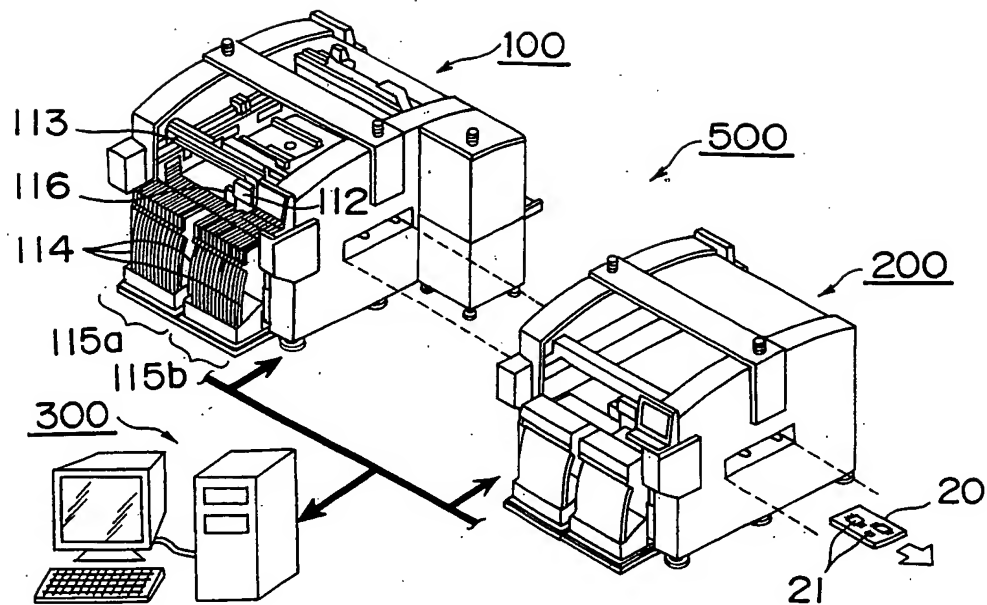


Fig. 2

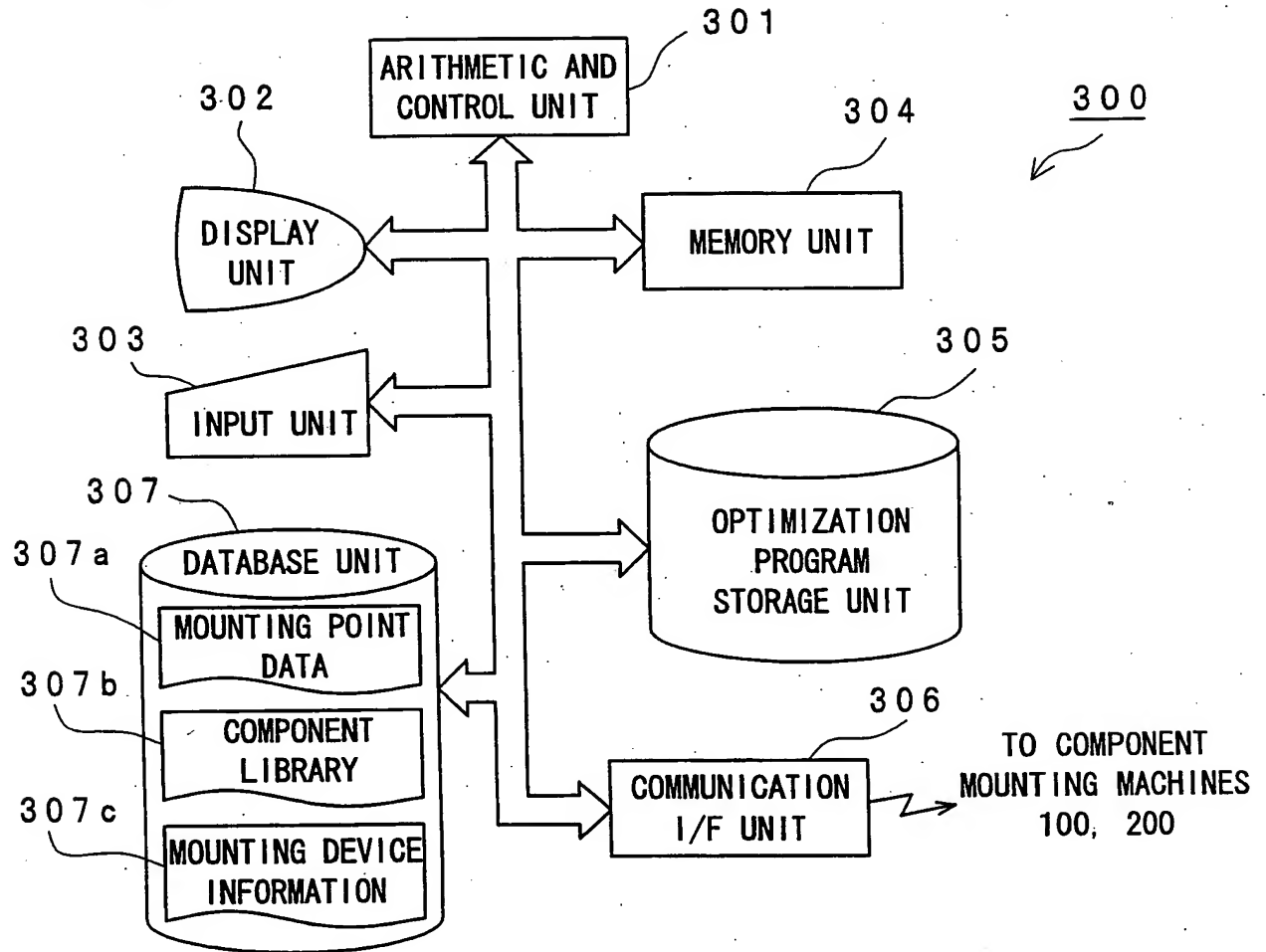


Fig. 3

MOUNTING POINT $p_i = (\text{COMPONENT TYPE } c_i, \text{ X COORDINATE } x_i, \text{ Y COORDINATE } y_i, \text{ CONTROL DATA } \phi_i)$

NC DATA IS LIST OF MOUNTING POINTS p_i

$$\text{NC DATA} = \begin{pmatrix} p_1 \\ p_2 \\ p_3 \\ \vdots \\ p_N \end{pmatrix} = \begin{pmatrix} c_1, x_1, y_1, \phi_1 \\ c_2, x_2, y_2, \phi_2 \\ c_3, x_3, y_3, \phi_3 \\ \vdots \\ c_N, x_N, y_N, \phi_N \end{pmatrix}$$

Fig. 4

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COMPONENT NAME	(COMPONENT APPEARANCE)	COMPONENT SIZE (mm)			TWO-DIMENSIONAL RECOGNITION METHOD	SUCTION NOZZLE	PROCESSING TIME (SEC)	PROCESSING SPEED XY
		X	Y	L				
0603CR		0.6	0.3	0.25	REFLECTION	SX	0.086	1
1005CR		1.0	0.5	0.3-0.5		SA	0.094	
1608CR		1.6	0.8	0.4-0.8		S		
2012CR		2.0	1.25	0.4-0.8				
3216CR		3.2	1.6	0.4-0.8				
4TR		2.8	2.8	1.1		CYLINDRICAL TIP	0.11	
6TR		4.3	4.5	1.5				
1TIP		2.0	φ1.0	-				S
2TIP		3.6	φ1.4	-				
1CAP		3.8	1.9	1.6				
2CAP		4.7	2.6	2.1				
3CAP		6.0	3.2	2.5				
4CAP		7.3	4.3	2.8				
SCAP		4.3	4.3	6.0	M			
LCAP		6.6	6.6	6.0				
LLCAP		10.3	10.3	10.5				
1VOL		4.5	3.8	1.6-2.4	M	0.13	2	
2VOL		3.7	3.0	1.6				
3VOL		4.8	4.0	3.0				

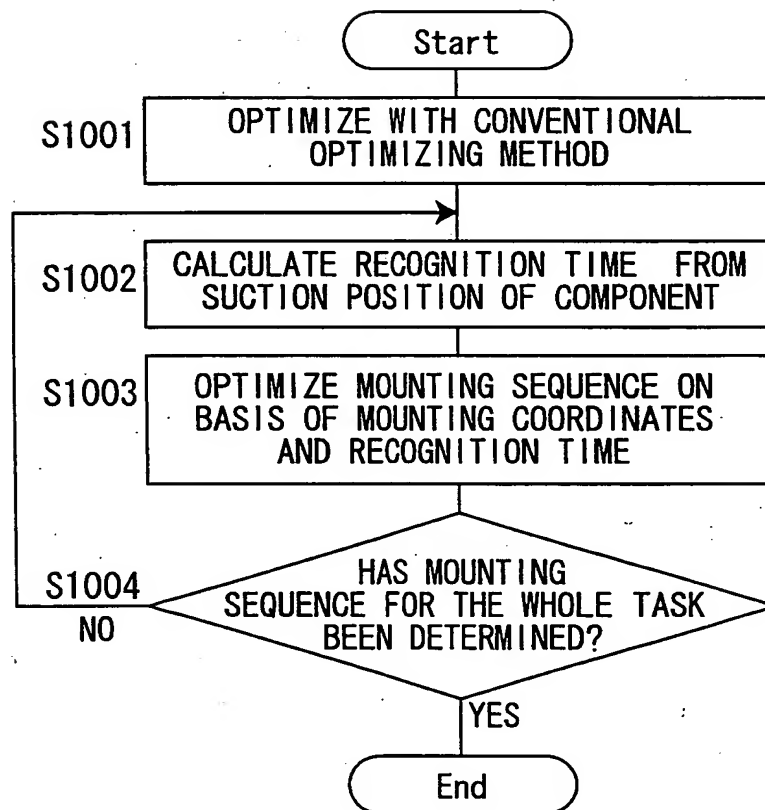
Fig. 5

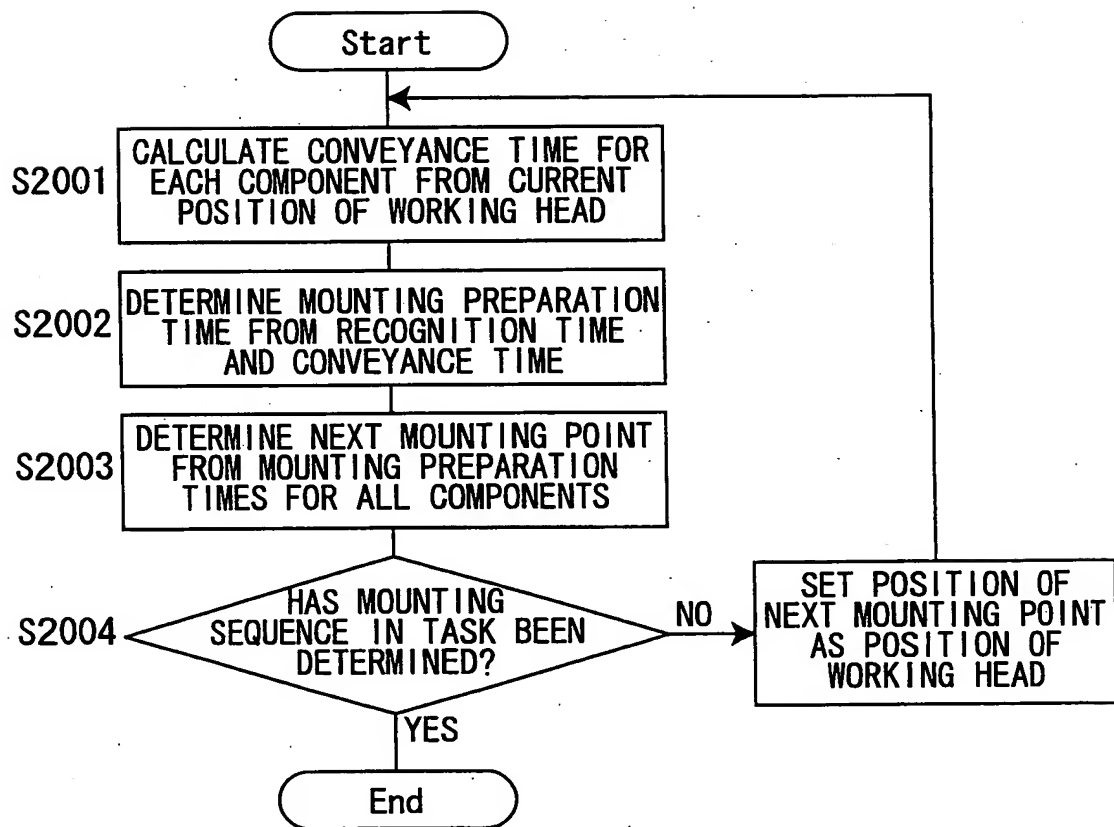
Fig. 6

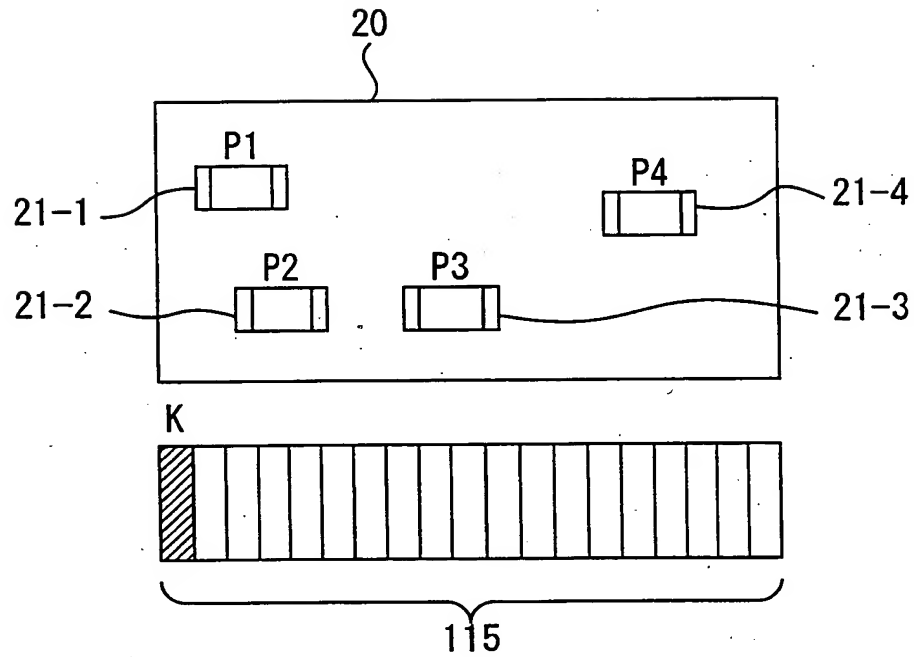
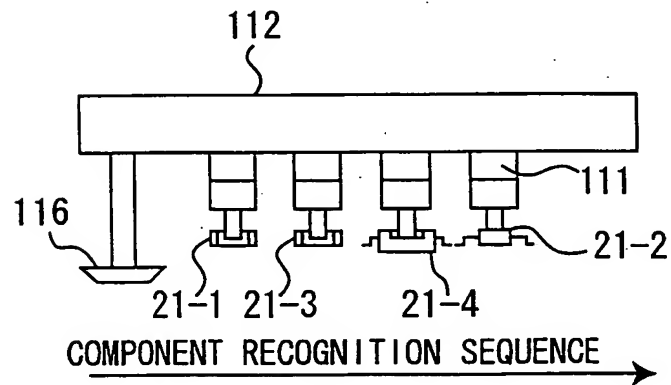
Fig. 7*Fig. 8*

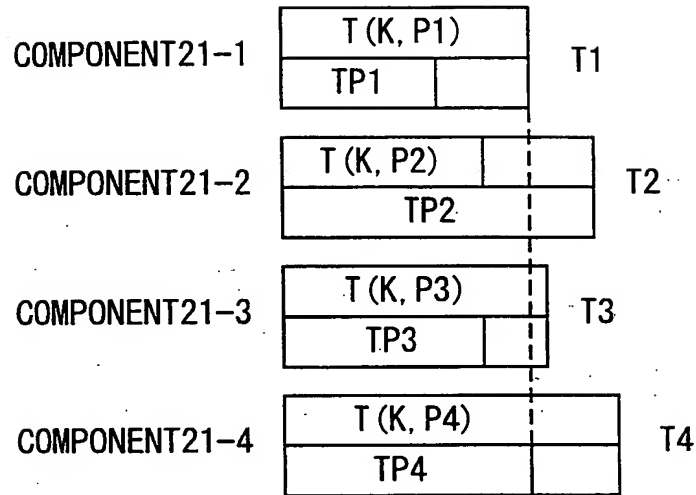
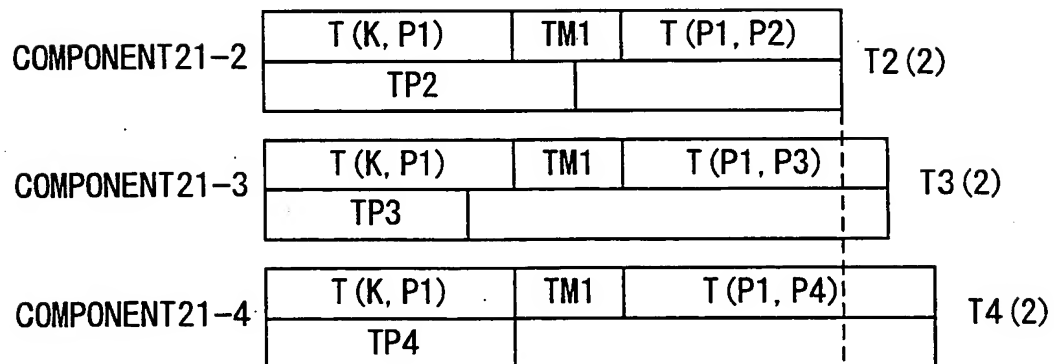
Fig. 9*Fig. 10*

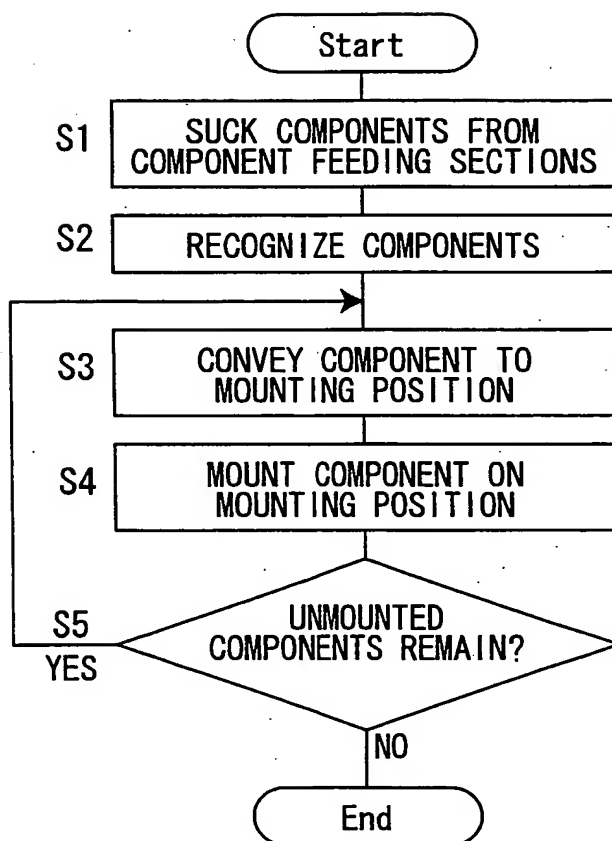
Fig. 11

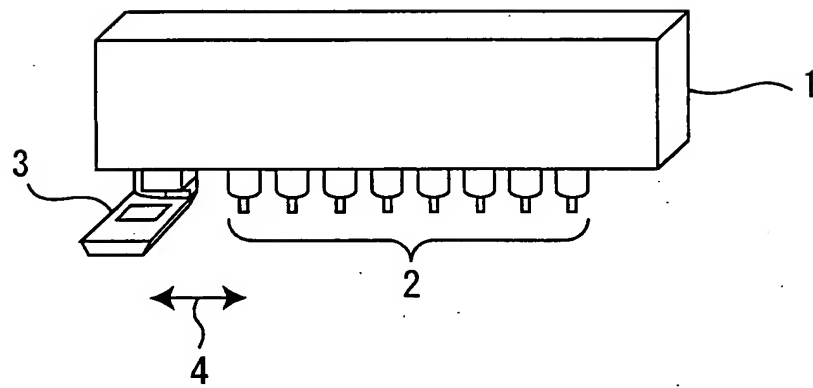
Fig. 12

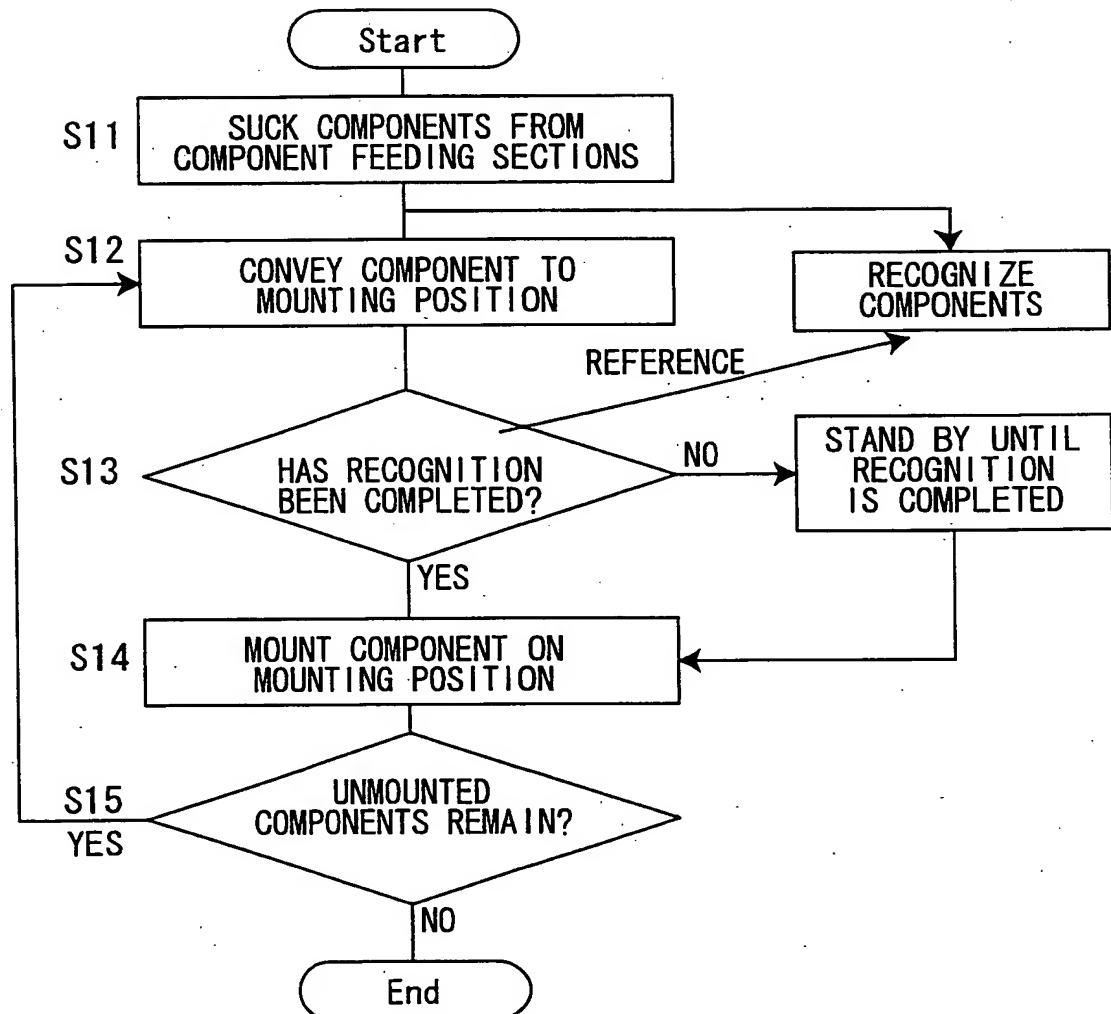
Fig. 13

Fig. 14

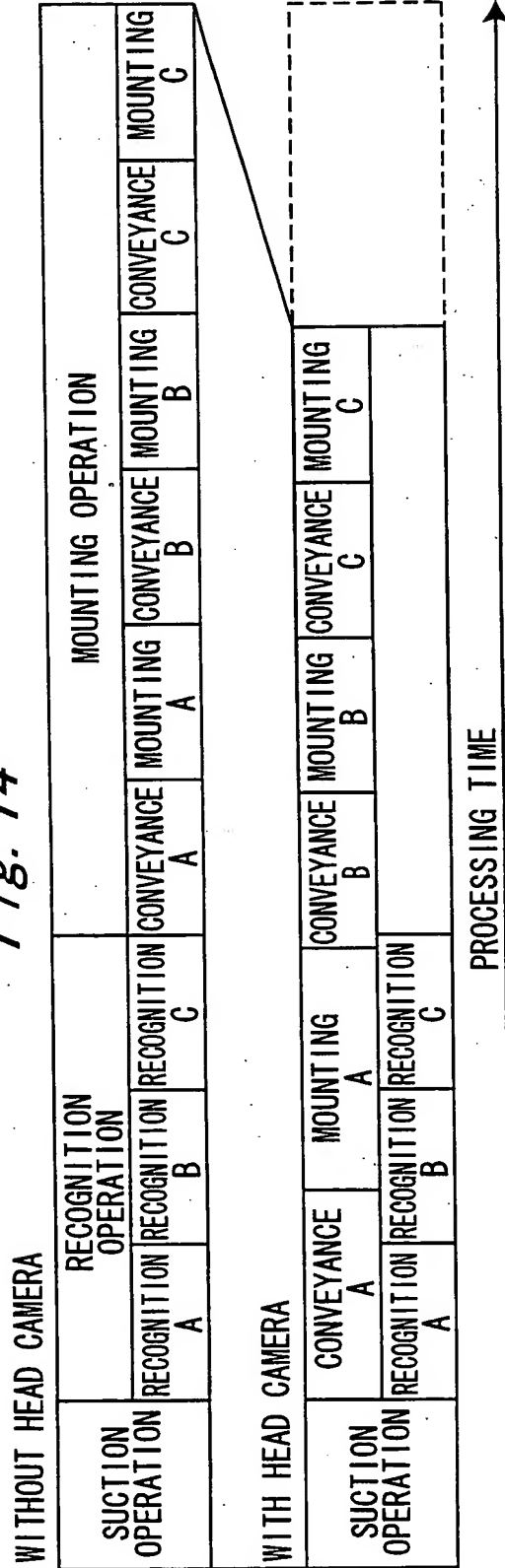


Fig. 15

